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HARD-CORE COCAINE ADDICTS: MEASURING—AND FIGHTING—THE EPIDEMIC

A STAFF REPORT

PREPARED FOR THE USE OF THE

COMMITTEE ON THE JUDICIARY
UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

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FOREWORD

SENATOR JOSEPH R. BIDEN, JR.

Chairman, Senate Judiciary Committee

Before we can properly fight the Nation's drug problem, we must understand its full dimension. Today's Committee Staff Report makes some important contributions to that understanding, the most significant of which is this fact:

> There are almost 2,200,000 hard-core cocaine addicts in this country—or put another way, about 1 out of every 100 Americans is a weekly user of cocaine.

This news is as alarming as it is tragic. It suggests that we have a hard-core addict problem that is far worse than virtually every previous estimate of its scope. Above all, it tells us this:

> *Unless we take decisive action to fight the crisis that hard-core addicts are causing in this country, our streets and schools will never be safe—and a large part of this generation of Americans will be lost.*

Undoubtedly, some people will ask, "Why another report telling us how bad the drug problem is? Haven't we heard enough about how many drug addicts we have in this country?"

These are fair questions, so before I comment further on this report's findings—and its recommendations for combating the hard-core cocaine epidemic—let me explain why I directed the staff to undertake this project.

WHY ESTIMATE THE NUMBER OF ADDICTS?

For almost a year now, the Nation's drug policy has been shaped by the basic assumption that there are only about 850,000 hard-core cocaine addicts in the country. Several conclusions, embraced in the administration's Drug Control Strategy, flowed logically from this assumption:

—Focusing primarily on reducing casual drug use, and not on reducing the number of hard-core addicts;

—Proposing only slight (12 percent) growth in drug treatment, so as to reach only 250,000 cocaine addicts next year;

—Offering no help to local governments to deal with their increased needs for prisons for criminal drug addicts.

If there were less than 900,000 hard-core cocaine addicts in the country, perhaps these policies would make sense. Perhaps it might even make sense to set as a goal a "decrease in the rate of increase" among this population—as the administration's strategy does—instead of aiming for an actual decrease.

Yet, for some time I have wondered how the basic assumption underlying all of this could be correct. Could the current social

problems we are seeing in this country be the product of just 850,000 hard-core cocaine addicts?

Many others have shared this concern—a concern fueled by the obvious shortcomings of the principal means we have of counting addicts in the country: the NIDA Household Survey. The shortcomings are revealed by the project's name itself: first, it surveys only *households*, which excludes many places (prisons, jails, homeless shelters, treatment centers) where one would expect to find hard-core addicts; and second, it is a *survey* (that is, it asks people to voluntarily disclose their drug habits), which makes it susceptible to dishonest responses.

This is not to criticize NIDA, which does an excellent job of compiling the most sophisticated data we have about drug use in this country. Their research is exceptional, and their professionalism—on the most limited of budgets—is to be admired. The fault does not lie with NIDA—which concedes the limits of the Household Survey—but rather, with those who take the NIDA data as an estimate of the national total of hard-core cocaine addicts.

Other researchers have previously shown that the Household Survey count is incomplete in many respects. Most significantly, in a path-breaking study, Dr. Eric Wish, a fellow at the National Institute of Justice, recently offered data suggesting that the criminal system encounters over 1½ million hard-core addicts in a given year. If this is true, Dr. Wish observes, then the Household Survey is at least short by half.

As a result, I directed the Judiciary Committee staff to compile the most comprehensive possible count of hard-core cocaine addicts undertaken to date. I told the staff to consult with experts in the field and to arrive at an estimate of the number of addicts that was conservative and complete.

This report is the product of these labors, which have been going on for the past several months.

The Findings of This Report

As I suggested at the outset, the findings of this report should give pause to us all:

There are at least 2.2 million hard-core cocaine addicts in America—almost triple the number revealed by the NIDA Survey.

Some States have extraordinarily high concentrations of such addicts; in New York, for example, 1 in 40 persons is a hard-core cocaine user.

The drug treatment system reaches only about 1 in 10 hard-core cocaine addicts—and while most of the others are arrested at some point in time, they are almost always back on the streets shortly after arrest.

And for those who wonder about the connection between cocaine and crime, there is this dramatic finding: one in every five persons arrested in this country—for any crime—is a hard-core cocaine addict.

These facts, and the others discussed in this report, suggest that we will need a massive new effort if we are going to combat the hard-core addict problem.

A Proposed Strategy to Combat the Crisis

Given the findings of this report—indicating that we have more than 2 million hard-core cocaine addicts in this country—it is clear that we cannot afford to continue with our current policy with regard to such addicts.

> That policy is, by and large, to leave addicts roving the streets of our cities and towns, neither in treatment or in prison, wreaking havoc on our neighborhoods and on themselves.

To respond to the crisis identified by this report, we present a five-part national plan for fighting hard-core cocaine addiction. The elements of this plan were part of a larger alternative drug control strategy (entitled "Fighting Drug Abuse: A National Strategy") that I released last January.

The need for the five proposals we call for here—emergency aid to hard-hit cities; building new drug offender prisons; opening more drug treatment centers; boosting street-level law enforcement; and researching medicines to treat drug addiction—should be clearer now than ever.

True, the cost of the actions outlined in this report, about $3 billion, is expensive. But the cost of inaction—soaring crime rates, escalating medical costs, expensive social programs—is even greater. One recent study suggested that each $1 invested in drug treatment saves society $5 in reduced crime and welfare costs.

> *An investment in fighting hard-core addiction is just that—an investment—one that will pay off dividends in the long-run.*

This is not to mention the extent to which basic human compassion—our pain at seeing crack babies quiver in their cradles, and young lives or promise cut short by drugs and related violence—compels us to explore new options.

In sum, we know that we must move on the hard-core addiction problem. Our conscience calls on us to act, our pocketbook commands that we do so now.

A Note on the Administration's Drug Strategy

Before closing, I want to make clear what this report is *not*: contrary to what some may wish to imply, this report is not an effort, of any sort, to suggest that the administration's drug strategy has "failed."

This report concludes that we have 2.2 million addicts—a startling number. Yet we steer deliberately clear of saying whether that number is higher or lower than it was a year ago, or that the administration's drug plan has or has not made progress in reducing it.

This report intends no critique of the success of the administration's drug strategy to date. Our intent is only to suggest why there must be changes in that strategy—now—if we are going to make substantial progress in dealing with the heart of the drug problem—hard-core cocaine addiction.

We are not criticizing where the administration's drug strategy has taken us thus far; rather, we are questioning where we will be in a few years if we do not launch some new initiatives now.

* * * * * * *

In closing, I want to thank the many experts who aided the committee staff in preparing this report. A full listing of those who were consulted appears in an appendix; we owe them a great debt of gratitude. Judiciary Committee staff members Chris Putala, Ross Mansbach, Lisa Meyer, Scott Green, Evelyn Lieberman, and Ron Klain deserve credit for their outstanding work on this report; special recognition must go to Chris Putala and Ross Mansbach for their extraordinary effort, intellect, and dedication. And finally, I wish to thank Professor Mark A.R. Kleiman of Harvard University, who as a special "advisor to the Chairman" guided the development of this report and oversaw its completion.

I know that it is their hope, as it is mine, that this report spurs a renewed effort to take immediate action on the crisis of hard-core cocaine addiction that is plaguing our country.

JOSEPH R. BIDEN, Jr.
Chairman.

MAY 10, 1990.

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Introduction

Working under my supervision, the staff of the Senate Judiciary Committee has produced a new and rather frightening estimate of the number of weekly or more-than-weekly cocaine users. As far as I know, this is the first attempt to estimate the total number of users, taking into account all of the available data sources.

This estimate is frightening because it is more than twice as high as the estimate projected from the household self-report data gathered under the sponsorship of the National Institute on Drug Abuse in 1988, which itself was up substantially from the comparable estimate made in previous years. Most of the difference comes from including an estimate of cocaine-using arrestees generated from the Drug Use Forecasting (DUF) system of the National Institute of Justice.

This implies no criticism of the NIDA Household Survey, though it does reflect considerable credit on the inventors and sponsors of DUF. It is as important to maintain consistent methodology in existing data collection efforts as it is to create new efforts to measure new phenomena.

It comes as no surprise that self-reports among a sample of the non-homeless, non-institutional population responding to a publicly sponsored survey generate a low estimate of the total prevalence of illicit drug use, particularly heavy illicit drug use. The more deviant a behavior is, the more likely it is to be underreported, both because participants are more likely to be institutionalized or homeless (and thus excluded from the sample) and because they are less likely to want to tell the truth to an interviewer perceived as working for the government.

The decreasing social tolerance for drug use and the continuing decline in the average social status of heavy cocaine users probably imply that the size of the underestimate is growing and will continue to grow. In short, the social profile of heavy cocaine use has begun to drop off the bottom of our Household-Survey radar. In this situation, we need new data collection efforts, such as DUF, which can measure what the Household Survey misses. The "Research Agenda" section of the 1990 National Drug Control Strategy provides penetrating analysis of what more is needed in this area;

the question remains, however, as to whether calls for added research will be matched by resources to get the job done.

Reducing the number of heavy cocaine users, particularly of heavy cocaine users whose drug behavior is linked to assault, theft, or drug dealing, is an important object of national drug policy. Because the distribution of cocaine use is heavily skewed, with a relatively small number of heavy users responsible for most of the total volume used, it is the number of heavy users which most strongly drives the physical and dollar volume of the illicit distribution industry, and thus the level of dealing-related violence. How to approach the task of reducing that number ought to be the focus of a national debate. To the extent that reducing the number of heavy users calls for a different mix of programs than reducing the total number of users, I would favor concentrating on heavy users who are also persistent assailants, thieves and dealers.

In this context, it is appropriate that the National Drug Control Strategy takes the number of more-than-weekly cocaine users as one of its performance indicators. At the time that strategy was published, the only estimate of that number was the Household Survey's self-report projection, and the Drug Coordinator's office was perfectly justified in basing its targets on the only measurement at hand.

Thanks to Chairman Biden and the Judiciary Committee staff, that is no longer true: we now have a respectable estimate of the total number of heavy cocaine users, including those not surveyed and those who fail to report their behavior accurately. That estimate ought to be refined, and calculated and published on a regular, perhaps annual, basis by one of the federal agencies responsible for research and statistics in this area: the National Institute on Drug Abuse, the National Institute of Justice, the Bureau of Justice Statistics, and the National Center for Health Statistics are all possible homes for such an estimation process. If that were to be done, then the "Frequent Cocaine Use" objective of the National Drug Control Strategy could be refined and measured using the new national estimate rather than the Household Survey self-report estimate.

Getting serious about the drug problem means getting serious about our capacity to measure it and our capacity to trace the relationships between alternative policies and important outcomes. Today's report improves these capacities, and those involved in producing it merit our thanks.

MARK A.R. KLEIMAN.

MAY 10, 1990.

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EXECUTIVE SUMMARY

The Nation's primary measure of drug abuse, the National Household Survey on Drug Abuse, misses more hard-core cocaine addicts than it counts. The Household Survey estimates that fewer than 900,000 hard-core cocaine addicts plague the Nation. For some time, this estimate has provoked much skepticism. How could fewer than 900,000 people bring such havoc to a nation of 250 million?

This report concludes that the actual number of hard-core cocaine addicts is much higher than that implied by the Household Survey—we conclude that there are about 2,200,000 hard-core users of cocaine in the United States, or roughly 1 out of every 100 Americans.

This is not to say the National Institute on Drug Abuse's Household Survey deliberately underestimates the total. The Survey asks a large sample of Americans if they use illicit drugs and, if so, how often. However, the Household Survey does not poll many who are likely to have serious drug abuse problems—the homeless and those in institutions, such as those in prisons or drug treatment centers. Leading researchers have also pointed out that the Household Survey underestimates the extent of America's drug abuse problem because the Survey relies on the accuracy of respondents' self-reported drug use.

This report attempts the first-ever comprehensive calculation of the national total of hard-core cocaine addicts. This report also includes the first-ever estimates of each State's hard-core cocaine addict populations.

Our calculations are based on data from many sources: every single State's drug treatment admissions; FBI and National Institute of Justice information on arrests and arrestees; reports on drug abuse among the homeless from Federal, State and local officials; as well as the work of several academic, private, and Government researchers.

These data indicate that the Nation's hard-core cocaine addict population is at least 2,200,000—about 2½ times the Federal Government's current official estimate. This conclusion is based on looking at addicts in four specific groups.

First, we looked at addicts in the Nation's drug treatment centers. Our research reveals that these centers admit about 200,000 hard-core cocaine addicts each year. In so doing, cocaine addicts use about one out of every three of the Nation's drug treatment slots. Still, not nearly enough cocaine addicts are treated—fewer than 1 in 10 addicts are admitted to treatment.

A second group of addicts overlooked in the Household Survey are homeless drug addicts. Our research reveals—in absolute terms—that the number of homeless cocaine addicts does not contribute significantly to the national total: we count approximately

55,000 homeless addicts, which is only 3 percent of the 2,200,000 total number of addicts our research revealed. However, even if their numbers are smaller, the concerns that homeless addicts give rise to may be great: homeless addicts are likely to suffer the most severe physical, mental, and social problems attendant to hard-core drug abuse. Because they are in such desperate straits, homeless addicts demand attention disproportionate to their number.

A third group of addicts we studied were those who had come into contact with the criminal justice system, via arrest. An estimated 1,500,000 hard-core cocaine addicts are arrested every year; that is, about three of every four cocaine addicts are arrested in a given 12-month period. It should come as no surprise that such a large percentage of addicts come into contact with the criminal justice system—the relationship between cocaine addiction and crime are well established. The 1,500,000 addicts who were arrested represent a significant share of the Nation's total arrestees, roughly one of every five persons arrested nationally. This suggests that cocaine is a major cause of crime in the United States.

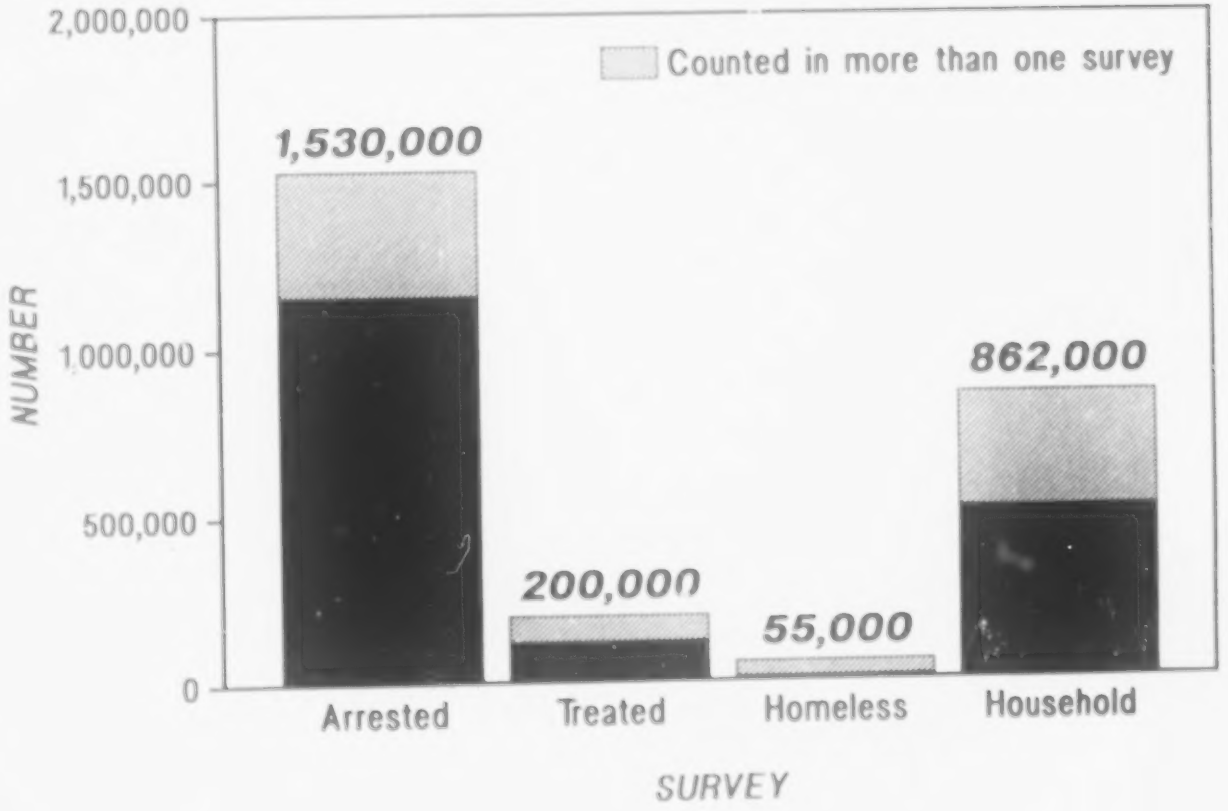
The fourth data source we looked at was the Household Survey itself. It is not the intent of this report to criticize NIDA's Household Survey. NIDA researchers perform their difficult task efficiently and effectively—and with very limited resources. Unfortunately, some others have presented the results of the Household Survey as a census of the Nation's total addict population. NIDA itself has never claimed this, and, this report indicates that such claims are plainly incorrect. The Household Survey adds valuable information to the Nation's anti-drug effort; all should agree. But, the full extent of America's cocaine epidemic is about 2½ times that indicated by the Household Survey.

Identifying a hard-core addict population almost three times larger than that previously suggested calls for dramatic changes in the focus and scope of the national anti-drug policy. In particular, it points to a need to reexamine the administration's national drug strategy, which is aimed primarily at the casual drug user. Chairman Biden has proposed an alternative anti-drug strategy that targets hard-core addicts—forcing them to either get into a treatment program or go to jail and get treatment there.

The Biden plan offers a multipronged attack to achieve this end: increasing aid to cities hardest hit by drugs; building new prisons that include treatment facilities; adding 400,000 new drug treatment beds; doubling Federal funds to State and local law enforcement; and expanding research into new medical treatments for drug addiction.

The need for these actions was clear in January when Senator Biden first set out this plan. The findings of this report should strengthen our resolve to take bold measures.

2,200,000 Hard–Core Cocaine Addicts: An Analysis of the Total



SECTION I.—AN ESTIMATE OF THE NATION'S HARD-CORE COCAINE ADDICTS: NATIONAL AND STATE TOTALS

Who are the Nation's hard-core cocaine addicts? Before we can answer this question we need to define the terms: what makes someone a "hard-core" addict as opposed to a casual user?

The Household Survey on Drug Abuse defines hard-core addicts as those who abuse drugs at least once a week. Alternative definitions could be used—for example, defining hard-core addicts by the social consequences of their use; thus, addicts who steal or deal drugs to support their habits are "hard-core" addicts regardless of the number of times they took drugs. Nonetheless, to ensure comparability, this analysis employs NIDA's Household Survey's definition.

A. THE HOUSEHOLD SURVEY: IMPORTANT, BUT INCOMPLETE

Whichever definition is used, we know that the Household Survey on Drug Abuse vastly underestimates the Nation's hard-core addict population. This is true for two major reasons.

First, the Household Survey does not even attempt to poll several groups of people very likely to be addicted to drugs—the homeless, patients in drug treatment centers, and State and Federal prisoners.[1] Because these people do not live in "households," they do not fall within the scope of the *Household* Survey.

The second systematic flaw with the survey, as summarized by Mark A.R. Kleiman of Harvard University, is that it is a *survey*: "A lot of people just won't tell the nice man from the government that they smoked crack recently."[2] Dr. Kleiman argues that this inaccuracy may have been exacerbated in recent years—the stigma attached to drug abuse has increased, lessening the tendency to truthfully report drug abuse.[3]

Finding a more accurate count of the number of hard-core addicts in the country is more than a matter of academic curiosity. As the President's Drug Strategy has suggested, the "knowledge that emerges from [such] research . . . serve[s] as a basis for . . . strategies to address our national drug problem."[4] More specifically, the prevailing wisdom based on the Household Survey—that there are about 900,000 hard-core cocaine addicts in the country—shapes a variety of important policy decisions about fighting the "drug war."

(1) How many drug treatment centers and spaces will we need?

(2) How many prison cells and anti-drug police strike forces are required?

(3) How realistic are the goals of our national drug strategy, and how should they be changed?

Replying on the Household Survey as the prevailing count of hard-core cocaine addicts lulls us into a false sense of the problem.

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[1] *U.S. News and World Report*, Mar. 5, 1990.

[2] *Ibid.*

[3] Testimony of Mark A.R. Kleiman before the House Committee on the Judiciary, Mar. 27, 1990.

[4] Office of National Drug Control Policy, *National Drug Control Strategy* (Washington: GPO, January 1990), p. 75.

It leads us to put too little into treatment programs, law enforcement, and other anti-drug efforts.

Perhaps most importantly, believing an artificially low count of hard-core addicts may lead to frustration, and ultimately, retreat in the "war on drugs," when a response inadequate to the actual magnitude of the problem fails to yield results. If, after pursuing a flawed strategy based on a flawed premise, drug abuse and drug-related crime fail to decline, the American people will grow weary of the effort, and withdraw their support for it—or demand more drastic alternatives.

B. A MORE ACCURATE ESTIMATE

Our drug strategy must fit our drug problem—and the Nation's No. 1 drug problem is hard-core cocaine use. That is why this study—which compiles data from a variety of sources in an effort to arrive at the first comprehensive count of hard-core cocaine addicts—was undertaken by the Judiciary Committee staff.

The results of this study are astounding. *Our research leads us to conclude that the actual number of hard-core cocaine addicts in this country is 2,200,000—more than 2½ times the Household Survey's count of 860,000.* Even more amazing still is that our count is a conservative one: in every case, this analysis uses the most conservative assumptions in reaching its conclusions.

Most troubling of all: according to all recent reports—including the administration's data—the hard-core addict population is growing. Thus, if our estimates of the current number of addicts are accurate, it is likely that the Nation's hard-core addict population will swell to 3 million by the end of 1991.

The full consequences of these estimates, and what we believe must be done in response to them, appear in this report's final chapter.

C. WHERE THE DATA CAME FROM

We begin with a brief overview of the four sources of data on the addict population that served as the basis for our conclusions.

Our first source was the Nation's drug treatment centers. Officials in each State provided us with the number of people who received treatment for cocaine addiction. Using these data and studies of cocaine addicts in treatment, we were able to conclude that there were about 20,000 hard-core cocaine addicts who came into contact with the Nation's drug treatment system. These addicts, by and large, were not included in the Household Survey.

A second population of addicts largely missed by the Household Survey are homeless drug addicts. Counting the homeless is a difficult and controversial task, but the very rough data that exist are adequate for a reasonable estimate of America's homeless addicts. Our research concludes that there are approximately 55,000 homeless hard-core cocaine addicts.

The largest share of previously undercounted addicts is in our third source: the criminal justice system. A pioneer in the field of tallying these addicts, Dr. Eric Wish (a visiting fellow at the National Institute of Justice), has developed a method for estimating the proportion of the Nation's arrestees who are hard-core cocaine

addicts. Dr. Wish compiled his data from more than 10,000 urinalysis tests of arrestees in 20 large American cities—results that indicate the percentage of arrestees who are hard-core cocaine addicts. Dr. Wish has used these data to estimate the number of cocaine-using arrestees in America's largest cities.

We also employed Dr. Wish's research to assess the level of drug abuse among arrestees in smaller cities, suburban and rural areas. Our analysis, like Dr. Wish's, indicates that there were approximately 1,500,000 hard-core cocaine addicts among the Nation's arrestees in 1988.

Of course, the fourth source of data is the Household Survey on Drug Abuse. The most recent Survey estimated a national total of about 860,000 hard-core cocaine addicts—a total that represented a 33-percent increase between 1985 and 1988, and the only group of drug users to have grown since 1988, according to NIDA researchers.

Merely combining these four sources of data—addicts identified by treatment, homeless addicts, addicts involved in the criminal justice system, and addicts counted by the Household Survey—would yield an overestimate of the number of addicts; obviously, there is some overlap among these four groups. Some of the homeless addicts were arrested; some addicts in treatment were also homeless; some addicts even fit into three of the categories.

Relying on extensive research and academic studies of each of the four addict groups, we were able to adjust for any "double-counts" before calculating the national total. Thus, to illustrate this point, the homeless addicts we added to the national total do not include those homeless addicts who were either arrested or treated.

D. STATE BY STATE DATA

Two of this report's four data sources—arrest reports and drug treatment admissions—offer information about each State. The resulting proportions were used to allocate the remainder of our national total across each State.

Table II identifies each State's hard-core cocaine addict population. New York tops the list with nearly one-half million addicts. California, Texas, Illinois, and Florida round out the top five. (Table III ranks the States according to their addict populations.)

TABLE II.—*Hard-core cocaine addicts—State totals*

(Alphabetical order)

State	*Addicts*
Alabama	22,000
Alaska	3,700
Arizona	43,000
Arkansas	8,400
California	325,000
Colorado	34,000
Connecticut	24,000
Delaware	2,700
Washington, DC	20,000
Florida	93,000
Georgia	48,000
Hawaii	9,400
Idaho	3,100

State	Addicts
Illinois	142,000
Indiana	14,000
Iowa	7,800
Kansas	13,000
Kentucky	13,500
Louisiana	29,000
Maine	2,900
Maryland	47,000
Massachusetts	30,000
Michigan	61,000
Minnesota	26,000
Mississippi	6,300
Missouri	46,000
Montana	1,700
Nebraska	7,900
Nevada	23,000
New Hampshire	3,500
New Jersey	66,000
New Mexico	12,800
New York	434,000
North Carolina	40,000
North Dakota	1,400
Ohio	57,000
Oklahoma	22,500
Oregon	17,000
Pennsylvania	81,000
Rhode Island	3,900
South Carolina	12,600
South Dakota	800
Tennessee	23,000
Texas	144,000
Utah	6,500
Vermont	1,200
Virginia	53,000
Washington	18,000
West Virginia	3,800
Wisconsin	47,000
Wyoming	1,300
National total	2,159,000

TABLE III.—*Hard-core cocaine addicts—State totals*

[Numerical order]

State	Addicts
New York	434,000
California	325,000
Texas	144,000
Illinois	142,000
Florida	93,000
Pennsylvania	81,000
New Jersey	66,000
Michigan	61,000
Ohio	57,000
Virginia	53,000
Georgia	48,000
Wisconsin	47,000
Maryland	47,000
Missouri	46,000
Arizona	43,000
North Carolina	40,000
Colorado	34,000
Massachusetts	30,000
Louisiana	29,000
Minnesota	26,000
Connecticut	24,000
Tennessee	23,000

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State	Addicts
Nevada	23,000
Oklahoma	22,500
Alabama	22,000
Washington, DC	20,000
Washington	18,000
Oregon	17,000
Indiana	14,000
Kentucky	13,500
Kansas	13,000
New Mexico	12,800
South Carolina	12,600
Hawaii	9,400
Arkansas	8,400
Nebraska	7,900
Iowa	7,800
Utah	6,500
Mississippi	6,200
Rhode Island	3,900
West Virginia	3,800
Alaska	3,700
New Hampshire	3,500
Idaho	3,100
Maine	2,900
Delaware	2,700
Montana	1,700
North Dakota	1,400
Wyoming	1,300
Vermont	1,200
South Dakota	800
National total	2,159,000

As mentioned above, 1 of every 100 Americans is addicted to cocaine. Table IV presents the corresponding per capita figure for each State. Not surprisingly, the per capita figures vary widely from State to State.

TABLE IV.—*Hard-core cocaine addicts—per capita State totals*

Addicts per 1,000 population

State	Addicts
Washington, DC	32.9
New York	24.4
Nevada	22.4
Arizona	12.7
Illinois	12.2
California	11.8
Colorado	10.4
Maryland	10.3
Wisconsin	9.9
Missouri	9.0
Virginia	9.0
Hawaii	8.7
New Jersey	8.6
Texas	8.6
New Mexico	8.5
Georgia	7.7
Florida	7.7
Connecticut	7.5
Alaska	7.1
Oklahoma	6.9
Pennsylvania	6.8
Michigan	6.6
Louisiana	6.5
Oregon	6.4
North Carolina	6.3

State	Addicts
Minnesota	6.1
Alabama	5.5
Kansas	5.4
Ohio	5.3
Massachusetts	5.2
Nebraska	4.9
Tennessee	4.7
Delaware	4.2
Washington	4.0
Rhode Island	3.9
Utah	3.9
South Carolina	3.7
Kentucky	3.6
Arkansas	3.5
New Hampshire	3.3
Idaho	3.1
Iowa	2.8
Wyoming	2.7
Indiana	2.5
Maine	2.5
Mississippi	2.4
Vermont	2.2
Montana	2.1
North Dakota	2.1
West Virginia	2.0
South Dakota	1.1
National total per capita	9.0

New York State tops this list, with about 1 out of every 40 New Yorkers being a hard-core cocaine addict. While large, urban States have the largest populations of addicts, some rural States exhibit the highest per capita rates of hard-core addiction. Nevada and Arizona are among the States with the 10 highest per capita addict populations.

New York State has long suffered from large addict populations—during the 1970's, perhaps as many as one-half of the Nation's heroin addicts lived in New York City. Thus, it is not surprising that New York State has the highest national total of hard-core cocaine addicts.

States with large urban populations, particularly those Northeast and industrial Midwest, are near the top of the State total and State per capita lists. These include such States as Illinois, Michigan, New Jersey, New York, Ohio, and Pennsylvania. Of these, only New York is a major entry point for America's cocaine supply.[5] This confirms the vast extent of America's cocaine distribution networks.

Rural States along America's Southwest border, the major route by which cocaine enters the United States, exhibit some of the most severe cocaine problems. Arizona, New Mexico, and Nevada are among the highest for per capita rates of hard-core cocaine addiction, and Texas also has a high addict population. These Southwestern States may, then, be victims of their location—there high incidences of cocaine addiction accompanying the ready availability of cocaine.

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[5] "The NNICC Report 1988: The Supply of Illicit Drugs to the United States," National Narcotics Intelligence Committee, April 1989.

States with the lowest per capita rates of cocaine addiction are almost exclusively rural States. (South Dakota, West Virginia, North Dakota, Montana, and Vermont have the five lowest per capita rates, respectively.) That rural States have the lowest rates of cocaine addiction conforms to most popular beliefs about America's cocaine epidemic. However, these beliefs, and the methodology employed by this report, might not accurately reflect the cocaine problem in rural America.

The low per capita rates in rural States may reflect the difficulty of detecting cocaine addicts in rural areas rather than actual rates of cocaine abuse. For example, police officers in rural areas often complain that they cannot detect lawbreaking because the areas they patrol are so large. Also, it is difficult to make the undercover drug buys necessary to arrest cocaine dealers and buyers in a small town because the dealers, buyers and police officers usually know each other. Thus, the rural cocaine problem may be worse than what is suggested here.[6]

Section II.—Hard-Core Cocaine Addicts in Treatment

Drug treatment centers house the most concentrated and readily accessible group of hard-core addicts in the Nation. Yet as self-evident as this observation is, such centers are not surveyed by NIDA researchers in the course of their Household Survey. Consequently, addicts in treatment are substantially undercounted in the Survey's estimates.

A. TREATMENT ADMISSIONS

We are not aware of any existing estimate of the number hard-core cocaine addicts admitted to the Nation's drug treatment facilities. As a result, the committee staff surveyed State drug treatment directors to measure this portion of the hard-core addict population.

Officials in each of the 50 States provided the committee with annual admissions data from the drug treatment programs that received Government funding. These officials also identified those patients who had received treatment for a cocaine addiction. About one-half of the Nation's total admissions for illicit drug abuse were for cocaine addictions. In total, aproximately 300,000 people were admitted for cocaine addictions in 1989 by the facilities covered by our sources.

California led the Nation in admissions for cocaine treatment, with a total exceeding 30,000. Other States treating more than 20,000 addicts included Maryland, Massachusetts, and Pennsylvania. New York—by all accounts, the State with the largest hard-core addict population—treated only about 10,000 addicts in public facilities last year. Seven States had less than 500 admissions.

The actual number of hard-core addicts who came into contact with the treatment system is not identical to the number of admissions. First, some addicts were admitted to treatment more than once in a single year. Employing data developed in the most complete study of the Nation's drug treatment system, the so-called

[6] Testimony from a Senate Judiciary Hearing on Drugs in Rural America, Apr. 10, 1989.

TOPS study, we estimated that 3 of every 10 1989 admissions were for people who had been previously treated that year.[7] Thus, about 210,000 addicts accounted for the approximately 300,000 admissions to cocaine treatment programs.

Second, not all who are admitted to treatment programs qualify as "hard-core addicts." Of course, entering a treatment clinic is, in itself, an announcement that one's drug habit is out of control. So it is no surprise that leading researchers confirm that almost all (as many as 97 percent of those treated for cocaine abuse are hard-core addicts.[8] Based on these studies, we applied a more conservative estimate—95 percent—for this analysis.

B. HARD-CORE ADDICTS IN TREATMENT

These calculations yield an estimate of 197,000 addicts identified by the Nation's drug treatment centers last year. (Table V presents these data.)

TABLE V.—*Hard-core cocaine addicts: Treatment admissions*

Total admissions	294,000
Number of addicts that correspond to the admissions total	208,000
Number of hard-core addicts among admitted addicts	197,000

The 197,000 total is a conservative estimate of the hard-core cocaine addicts seeking treatment. As noted above, the treatment figures we obtained from each State included only publicly funded treatment facilities. While most addicts are treated by such publicly funded centers, the treatment centers that were not included in our data (private for-profit facilities for example) nonetheless treat a substantial share of the Nation's addicts. Their share may be as many as one-fifth of the Nation's addicts seeking treatment.[9]

Two observations spring from this analysis: first, relatively few cocaine addicts are admitted to treatment and, second, hard-core cocaine addicts use a large share of the Nation's drug treatment capacity.

The 200,000 hard-core addicts admitted to drug treatment represents about 9 percent of our 2,200,000 addict total. Providing treatment to only 9 of every 100 addicts is an intolerably low figure. Several factors account for this low rate—too few treatment slots, ineffective out-reach efforts, insufficient will power of many addicts, and inadequate incentives—both carrots and sticks—to seek treatment.

A total of approximately 700,000 people are admitted to the drug treatment centers covered by this analysis. Given our estimate of 200,000 treated hard-core cocaine addicts, the cocaine epidemic is consuming almost one-third of the Nation's drug treatment supply.

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[7] Robert L. Hubbard, et al., *Drug Abuse Treatment: A National Study of Effectiveness* (Chapel Hill: The University of North Carolina, 1989), p. 75.

[8] Frank H. Gawin and Herbert D. Kleber, "Abstinence Symptomatology and Psychiatric Diagnosis in Cocaine Abusers," *Archives of General Psychiatry*, vol. 43, February 1986; Frank H. Gawin and Herbert D. Kleber, "Cocaine Use In A Treatment Population: Patterns and Diagnostic Distinctions," *Cocaine Use in America: Epidemiologic and Clinical Perspectives* (National Institute on Drug Abuse Research Monograph 61, 1985); C.R. Schuster and M.W. Fischman, "Characteristics of Human Volunteering for a Cocaine Research Project," *Ibid.*

[9] Office of National Drug Control Policy, *National Drug Control Strategy* (Washington: GPO, January 1990), p. 36.

SECTION III.—HARD-CORE COCAINE ADDICTS AMONG THE HOMELESS

The Census Bureau's recent effort to count America's homeless citizens indicates that any estimate of the Nation's homeless population is subject to heated debate. Since our goal is to estimate the number of hard-core addicts among the homeless—and since cocaine addicts constitute only a small portion of the homeless population—we did not need to enter the controversy over the precise size of America's homeless population to complete our analysis.

A. ESTIMATING THE NUMBER OF HOMELESS ADDICTS

Almost all agree that the homeless population numbers between 1 million and 3 million. Obviously, this is a difference with enormous significance to any policy decisions regarding the homeless. However, as this analysis demonstrates, the difference between these widely varying estimates has only minor impact on our calculation of the total number of hard-core addicts. Consequently, our choice of which specific estimate of the homeless population to employ in this research had little impact on our overall results.

Recent studies conducted by academic and private researchers indicates that between 7 and 11 of every 1,000 Americans are homeless.[10] A report to Congress by the U.S. Department of Education on the number of homeless children living in every State confirms this range.

These data, along with estimates provided to the committee staff by State and local officials, supported a national estimate of 2,100,000 homeless for the purpose of this research.

For the three other addict populations we studied—addicts in treatment, in the criminal justice system, and addicts measured by the Household Survey—we were able to employ specific data regarding drug abuse patterns and population estimates. Little such data exists for the homeless addict population.

Consequently, we were forced to calculate the number of homeless addicts by applying an overall estimate of hard-core addiction among the homeless to the national homeless population estimate. This yielded, undoubtedly, the least accurate data in this report. However, given the small numbers of homeless addicts (as compared to the other addict populations studied here), the impact of this inaccuracy on the report's overall estimates of the addict population were minimal.

B. DRUG USE RATES AMONG THE HOMELESS

Drug abuse patterns among the homeless have been studied in several localities. The New York State Division of Substance Abuse Service reports that homeless New Yorkers were about 5.5 times more likely to be hard-care cocaine addicts than were other New York State residents—and this estimate excluded New York City residents.[11] A detailed analysis of Baltimore's homeless revealed

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[10] Laura Dekoven Waxman and Lilia M. Reyes, *A Status Report on Hunger and Homelessness in America's Cities: 1988*, U.S. Conference of Mayors, 1989; Partnership for the Homeless, *Moving Forward: A National Agenda to Address Homelessness in 1990 and Beyond and A Status Report on Homelessness in America* (New York: 1989).

[11] Bruce D. Johnson, et. al., *Illicit Substance Use Among Adults in New York State's Transient Population*, New York State Division of Substance Abuse Services, 1988.

similar results; the prevalence of serious cocaine abuse among Baltimore's homeless is roughly 5 times the national average—2.5 percent against the 0.4 percent Household Survey estimate.[12]

Similar results have been collected across the country. Studies of random samples of homeless people in Detroit, Los Angeles, Ohio, and St. Louis identify similarly high prevalences of cocaine abuse.[13]

All of these data lead us to conclude—under the most conservative estimates—that hard-care cocaine abuse is about 5 times more common among the Nation's homeless than among the general population. Applying this prevalance—2.5 percent—to the estimate of the homeless population we employed (2,100,000) yields a national total of about 55,000 hard-core cocaine addicts. (Table VI summarizes these data.)

TABLE VI.—*Hard-core cocaine addicts: Homeless*

Total homeless	2,100,000
Homeless hard-core addicts (2.5 percent of total)	55,000

Even significant changes in our estimate of the homeless population and the proportion of drug abuse have little effect on the national total of hard-core cocaine addicts. If, for example, we used the largest estimate of the homeless population, 3 million, the homeless addict population would change by 20,000—less than 1 percent of the 2,150,000 total. Or, if we reduced the proportion of hard-core cocaine abuse by half, from 2.5 percent to 1.25 percent, the homeless addict population would change by about 28,000—again, even a large change for the homeless population would have negligible effect on the national total.

The cocaine addict whose problems are compounded by homelessness presents one of the most desperate aspects of our Nation's drug epidemic. These addicts' drug abuse is likely to be severe and longstanding. The homeless addict is also likely to suffer from the most extreme forms of mental illness. Malnutrition and the health problems attendant to drug abuse pull the homeless addict even further way from society. Indeed, while their numbers may be relatively small, homeless addicts may need a disproportonately large share of the Nation's drug treatment and assistance resources.

Moreover, our analysis indicates that most of these desperate addicts come in contact with the criminal justice system or our drug treatment system. The others are sure to come in contact with other public agencies—social services or hospitals.

Thus we believe that the principal problem is not one of identifying these addicts, but one of dealing with their addiction and other problems. Given the small size of this population, the total cost of treating their poblems is not excessive. And, given the drastic problems suffered by—and in turn, caused by—these addicts, the social benefits of public action vastly outweight its costs.

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[12] William R. Breakey, et al., "Health and Mental Health Problems of Homeless Men and Women in Baltimore," *Journal of the American Medical Association*, vol. 262, No. 10, 1989.

[13] Richard C. Tessler and Deborah L. Dennis, *A Synthesis of NIMH-Funded Research Concerning Persons Who Are Homeless and Mentally Ill* (Program for the Homeless Mentally Ill, Feb. 9, 1989).

SECTION IV.—HARD-CORE COCAINE ADDICTS AMONG ARRESTEES

The largest single group of cocaine addicts in this country is arrestees. It should come as no surprise that a high percentage of those arrested for committing crimes are regular cocaine users—or conversely, that a high percentage of regular users are arrested for some offense over the course of a year.

Unfortunately, this is a population particularly likely to be undercounted by the Household Survey. In the first instance, those arrestees who wind up in prison, jail, or detention are not surveyed at all by NIDA. Moreover, those arrestees who are at home when NIDA calls—on bail, probation, parole, or due to a dismissal of charges—are very unlikely to admit to any drug use when polled. It is hard to imagine any person with *less* incentive to be honest about his drug use than someone in this situation.

A. DRUG USE AMONG ARRESTEES

The convergence of these two facts—the high rates of cocaine use among arrestees, and the strong probability that arrestee-addicts are not measured in the Household Survey—has led many reseachers interested in finding an accurate number of cocaine addicts to examine this addict population quite closely.

Dr. Eric Wish, today a visiting fellow at the National Institute of Justice, has measured drug use among arrestees in New York City and around the country. In 1973, Dr. Wish led one of the first research projects to study drug use among arrestees with urinalysis technolgoy. Dr. Wish has managed the Drug Use Forecasting (or "DUF") research since 1988.

The Drug Use Forecasting system offers the most accurate picture of drug abuse among arrestees. Unlike the Household Survey, and as mentioned above, the Drug Use Forecasting System research does not rely on the honesty of its respondents. The DUF survey measures drug abuse by urinalysis technology.

We relied heavily on DUF data in assembling this report. In 1988, DUF researchers measured drug abuse among 10,000 offenders arrested in the Nation's 20 largest cities. These samples measured a proportion of drug-using arrestees for each of these 20 cities. Applying, as other researchers have done, the proportion testing positive for cocaine in the sample to the broader class of all those arrested,[14] we obtained an estimate of the total number of cocaine-using arrestees [15] in each of these 20 cities.

The 20 cities surveyed by the DUF system range in size from more than 3 million people to as few as 280,000, and are drawn from all parts of the country. They are a representative sample of America's 64 largest cities (that is, cities with populations exceeding 250,000). As Dr. Wish did in his analysis, we calculated the arrestee cocaine-use in the 44 large cities *not* surveyed by DUF by

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[14] Eric D. Wish, "U.S. Drug Policy in the 1990's: Insights from New Data from Arrestees," *International Journal of the Addictions* (forthcoming).

[15] Arrest statistics from the F.B.I.'s Uniform Crime Report provide total arrests. Research on arrestee cohorts indicate an average rate of 1.33 arrests per person. [Blumstein, 1982; Green & Stollmack, 1981.] Thus, arrest totals are divided by 1.33 to estimate the corresponding number of persons arrested.

applying the simple average of all DUF cities—47 percent—to these 44 cities.

Hospital emergency room data on drug overdoses supports this analysis and the resulting findings. Hospitals from 20 major cities report drug overdoses episodes to the U.S. Health and Human Services Drug Abuse Warning Network. Twelve cities are included in both the DUF system and the Drug Warning Network. Comparing the two studies proves that a city's cocaine overdose episodes were a fair predictor of the prevalence of cocaine use among that city's arrestees. (Detailed explanation of this analysis appears in the appendix.)

This analysis allows us to predict the arrestee cocaine-use rate in cities covered by the Drug Abuse Warning Network, but not the Drug Use Forecasting System. These results indicate cocaine-use rates in non-DUF cities between 42 percent and 53 percent—very close to the 47 percent average rate found in the cities included in the DUF system. This, then, supports the use of the DUF average in all large cities.

The proportion of hard-core cocaine addicts found in smaller cities, suburban and rural areas is significant, but most research indicates that the proportions are lower than those found in large cities.

For example, the proportion of hard-core cocaine addicts among arrestees from the smallest city included in the DUF system, Fort Lauderdale, Florida, was close to the DUF average—42 percent in Fort Lauderdale, as compared to the 47-percent average. Urinalysis tests conducted in Lawrence, Massachusetts—a city of 60,000, 30 miles northwest of Boston—during 1986 identified more than 30 percent of arrestees as hard-core cocaine addicts.[16]

While this research indicates that a much higher rate (30 percent or even 40 percent) could be applied to arrestees from small cities, this analysis will use a much more conservative estimate—15 percent. This proportion is about one-third the large city average and equal to the lowest proportion of cocaine abuse found among any DUF city arrestees (15 percent in Indianapolis, Indiana).

A few jurisdictions disaggregate urinalysis data—separating offenders arrested in urban areas from offenders arrested in suburban areas. For example, in Milwaukee, Wisconsin, 39 percent of those arrested in urban areas tested positive for cocaine use, while 33 percent of the suburban arrestees tested positive.[17] Prince George's County, Maryland, tests all offenders at arrest; in 1988, about one-half (47 percent) of all arrestees (in suburban Washington, D.C.) tested positive for cocaine.[18] Urinalysis tests of offenders released on probation in Kanawha County, West Virginia, identify 20 percent of all offenders as cocaine users.[19]

Hospital emergency room data on drug overdoses suggests that arrestees from suburban and rural areas are about one-third as likely to be hard-core cocaine addicts as urban arrestees. Roughly

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[16] Mark A. R. Kleiman, *Heroin Crackdowns in Two Massachusetts Cities* (National Institute of Justice Grant Number 85-IJ-CX-0027).

[17] Information supplied by Wisconsin Correctional Service.

[18] Information supplied by Prince George's County Pre-Trial Services Department.

[19] Information supplied by Kanawha County Probation Department.

35 of every 10,000 visits to emergency rooms in urban areas were caused by cocaine. For suburban and rural areas, the corresponding figure is about 12 of every 10,000—one-third the large city rate.

Again, while the available evidence would support much higher rates (20 percent to 30 percent), this analysis will apply very conservative estimates—7.5 percent—to arrestees from suburban and rural areas. This rate is less than one-sixth the DUF city average, and one-half the lowest rate found in any DUF city.

B. HOW MANY ADDICTS

How many of those who test positive at arrest are hard-core cocaine addicts? According to most leading researchers, a great majority of those testing positive for cocaine at the time of arrest use the drug at least once a week—that is, are hard-core cocaine addicts.[20]

Because cocaine metabolizes so quickly (within 48 to 72 hours), any arrestees testing positive for cocaine had to have abused cocaine within a few days of their arrest. Thus, Dr. Wish concludes, "It is therefore reasonable to assume that nearly all of the persons who tested positive for cocaine at arrest probably used the drug at least once a week."[21]

Even if this assumption overestimates the number of hard-core addicts among arrestees, such an overstatement only compensates for an offsetting understatement of cocaine use in the DUF data. As Dr. Wish and other researchers point out, the cocaine-use rate revealed by the DUF system tends to underestimate the actual rate. The DUF system undersamples arrestees charged sale or possession with drugs. Since these arrestees are the most likely to abuse drugs near the time of arrest, the DUF research underestimates the proportion of recent drug by about 6 percentage points.[22]

Still, to be conservative, we assume that 20 percent of those arrestees who tested positive for cocaine—indicating cocaine was used within a few days of arrest—are *not* hard-core cocaine addicts.

Thus, our research indicates that there are 1,068,000 hard-core cocaine addict-arrestees in America's 64 largest cities—applying the DUF rate where available and the 47-percent average DUF rate for the other 44. For small cities, applying the 15-percent rate yields an estimate of 113,000 hard-core cocaine addict-arrestees. And, for suburban and rural areas, applying the 5-percent rate yields an estimate of 348,000 hard-core cocaine addict-arrestees. The resulting total—1,529,000—is presented in Table VII.

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[20] Bruce D. Johnson, et al., *Taking Care of Business*, (Lexington, MA, 1985); Eric Wish and Bruce D. Johnson, "The Impact of Substance Abuse on Criminal Careers," *Criminal Careers and "Career Criminals"* (Washington: National Academy Press, 1986); Jan Chaiken and Marcia Chaiken, *Varieties of Criminal Behavior* (Santa Monica, CA: The Rand Corp., 1982); Ball et al., "The Criminality of Heroin Addicts When Addicted and When Off Opiates," *The Drugs-Crime Connection* (Beverly Hills: Sage Press, 1981); M. R. Chaiken and Bruce D. Johnson, *Characteristics of Different Types of Drug Involved Offenders* (Washington: National Institute of Justice, 1988).

[21] Eric D. Wish, "U.S. Drug Policy in the 1990's: Insights from New Data from Arrestees," *International Journal of the Addictions*.

[22] Eric D. Wish, "U.S. Drug Policy in the 1990's: Insights from New Data from Arrestes," *International Journal of the Addictions* (forthcoming).

TABLE VII.—*Hard-core cocaine addicts: Arrestees*

Large cities (2,463,000 arrestees)	1,068,000
Small cities (886,000 arrestees)	113,000
Suburban and rural (5,569,000 arrestees)	348,000
Total	1,529,000

This analysis indicates that about two of every three hard-core cocaine addicts are arrested each year. This is not surprising, for the relationship between crime and drug addiction is well documented. Researchers offer several reasons to explain this linkage. First, drug addicts often steal or deal drugs to support their habit. Second, drug use, particularly of stimulants such as cocaine, may chemically trigger violent behavior. And, third, some suggest that drug use causes crime because it brings addicts in frequent contact with other criminals and law-breaking in general.[23]

These 1,500,000 addicts represent a significant share of the Nation's total arrestees, roughly one of every five arrestees. While there is much debate about the precise number of crimes committed, researchers agree that drug addicts commit many more crimes than other offenders.[24] Thus, this analysis suggests that cocaine is an important cause of crime in the United States.

SECTION V.—HARD-CORE COCAINE ADDICTS: HOUSEHOLD SURVEY ON DRUG ABUSE

The NIDA researchers responsible for the Household Survey perform a mighty task skillfully and efficiently. Though some may view the issuance of this report as (at least) an implicit criticism of the Household Survey, nothing could be further from the truth.

This report is not at odds with NIDA's Survey—but rather, with policy makers and analysts who do what NIDA declines to do: equate the NIDA estimate of hard-core cocaine addiction with the *national total* of hard-core cocaine addicts.

A. REVIEW OF THE HOUSEHOLD SURVEY ON DRUG ABUSE

This is true because the drug abuse estimates provided by the Survey do not provide a complete picture of the Nation's drug epidemic. The underestimates are most severe in the Survey's count of hard-core drug addicts. For example, the national estimate of 862,000 hard-core cocaine addicts is projected from 65 respondents (out of 8,814 total respondents) who admitted using cocaine or crack weekly. If only 7 more or less of the 8,800 respondents admitted weekly use, the national total would change by about 80,000. Obviously, the Household Survey requires heroic extrapolations to generate estimates of hard-core drug abuse.

Moreover, as mentioned above, the Household Survey does not measure drug use among the homeless, nor among those in treatment centers, prisons or jails.

Still, NIDA researchers should not be criticized for their efforts to estimate the national population of hard-core addicts. Rather, they should be lauded for their efforts, which should be expanded to enhance NIDA's epidemiological research capacity. Extra re-

[23] Paul Goldstein, "Drugs and Violent Crime," *Pathways to Criminal Violence* (Beverly Hills: Sage Publications, 1989), pp. 16–48.
[24] Jan Chaiken and Marcia Chaiken, *Varieties of Criminal Behavior* (Santa Monica, CA: 1982).

sources should be provided to NIDA so that it can interview more people, especially those groups not polled by the current Survey. Household researchers should also have the resources necessary to release the Survey sooner than it has been in the past.

B. ADDICTS COUNTED BY THE HOUSEHOLD SURVEY

The 1988 Household Survey on Drug Abuse estimated a national total of 862,000 hard-core cocaine addicts. Though the Survey generally undercounts the three other addict populations we have discussed, some portion of the Household Survey's total do appear in our surveys of drug treatment centers and arrestees. Section VI identifies this overlap, as well as the overlap of our other surveys.

The Household Survey does not provide addict population estimated for each State. This analysis uses the proportions established by the treatment and arrestee data—both offer State-by-State totals—to allocate the Household Survey addicts to each State. In other words, each State's share of the Household Survey addicts is determined by its share of the Nation's treated and arrested addicts. (This methodology is discussed in greater detail in the Appendix of this report.)

C. RECOMMENDATIONS FOR THE HOUSEHOLD SURVEY

The three groups of addicts that the Household Survey does not measure—those who are arrested, homeless, and in treatment—represent a broad spectrum of people who are not easy to poll. Yet they must be counted. And given the transience of their populations, they must be counted often if accurate epidemiological data are to be maintained.

This report has pointed out both the inadequacies in the Nation's epidemiological data an drug abuse and the great importance of accurate data to our Nation's anti-drug effort. The major problems with the Household Survey are two: first, it must be expanded to measure drug use among those populations currently missed and, second, it must be delivered in a more timely fashion.

To achieve this goal, the Federal Government should increase NIDA's funding for the Household Survey to $15 million—a three-fold increase over the fiscal year 1990 budget, and $5 million more than the administration's fiscal year 1991 budget request. These funds are necessary to carry out NIDA's desire to triple the number of people interviewed for the Survey.

The National Institute on Drug Abuse must also receive the funds necessary to compile and analyze the results from all Federal drug abuse surveys. This reports offers several methodologies for combining results from surveys of the treatment, homeless, arrestee, and general populations. These methodologies should be subject to further analysis and new methodologies must be developed.

Additionally, the National Institute on Drug Abuse should explore methods for gathering data on drug abuse from suburban and rural communities. A few communities are collecting such data, but NIDA researchers should explore ways to make these data available to researchers and policymakers. Finally, NIDA must make the raw data (absent any information which links data to individuals, of course) from all surveys available to academic and private researchers.

SECTION VI.—CALCULATING THE NATIONAL TOTAL OF HARD-CORE COCAINE ADDICTS

This report has presented data from four groups of addicts—those in treatment, those who are homeless, those who have been arrested, and those counted by the Household Survey. Of course, the total addict population cannot be arrived at by simply summing these four groups because the four addict populations counted in this report overlap to some extent.

For instance, in 1989 some people both received treatment and were arrested. Similarly, certain homeless may have received drug treatment and been arrested during the same year. To determine the true magnitude of the hard-core addict problem, such "double counts" and "triple counts" must be eliminated from the final tally.

Existing epidemiological research provides information sufficient to identify a potential range of such "double counts." We have used only the most conservative, or cautious, estimates in tabulating the total number of hard-core cocaine addicts in the country from the raw data. In other words, where in doubt, this report will assume that an addict has been "double counted".

A. TREATED ADDICTS: OVERLAP WITH OTHER SURVEYS

Section II of this report concerned the number of hard-core addicts who received drug treatment in 1989. The raw total was 197,000 addicts. The TOPS research project found that 40 percent of treatment patients were involved with the criminal justice system when they entered drug treatment.[25] Among those included in the project's survey were individuals on probation or parole. Some, but not all, of those in the survey were arrested during the same year they entered drug treatment.

However, this report will assume that all 40 percent were arrested during the same year that they sought treatment. This assumption is made in the interest of deriving the most conservative total possible.

Therefore, of the 197,000 hard-core addicts admitted to treatment last year, 80,000 of them were also arrested in 1989.

The remainder of those who received drug treatment, 120,000 people, are a distinct group, and, thus, this report will add them to the total national count.

B. HOMELESS ADDICTS: OVERLAP WITH OTHER SURVEYS

Section III estimated the number of homeless hard-core cocaine addicts at 55,000. Numerous studies indicate that a large portion of them are arrested or admitted to treatment at some point during a given year. Studies in Baltimore, Detroit, Los Angeles, Milwaukee, New York City, and St. Louis—as well as statewide investigations in New York and Ohio—reveal that between 20 and 60 percent have been arrested at least once.[26] These percentages apply to the

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[25] Robert L. Hubbard, et al., *Drug Abuse Treatment: A National Study of Effectiveness* (Chapel Hill: 1989), pp. 75-76.

[26] Bruce D. Johnson, et al. *Illicit Substance Use Among Adults in New York State's Transient Population* (December 1988); Richard C. Tessler and Deborah L. Dennis, *A Synthesis of NIMH*

Continued

general homeless population, which includes families, young mothers, and others who are not prone to break the law. The subgroup that encompasses hard-core addicts no doubt would have a higher-than-average arrest rate.

Researchers have also studied the likelihood that the homeless will receive drug treatment. For example, in New York State (excluding New York City), about 20 percent have received such care.[27]

Because it is difficult to count the number of homeless, it is at least equally difficult to calculate trends among subgroups. It is not surprising, therefore, that there exists no empirical study estimating the proportion of hard-core homeless cocaine addicts who have been admitted to treatment and arrested. The large number of variables precludes the possibility of gathering reliable information.

Obviously there is significant overlap—most homeless addicts are arrested, admitted to treatment, or both. Consequently, this report will include only 10 percent of the homeless addicts in its national total. Taking 10 percent of the 55,000 raw total translates into an unduplicated count of 5,000 addicts.

C. ARRESTED ADDICTS

Section IV determined the number of hard-core cocaine addicts among arrestees. Totalling 1,500,000 people, it is by far the largest single group. The raw total will stand as an unduplicated count because this report has used arrestees as its primary sort variable. In other words, the first two groups, treated and homeless addicts, were purged of their overlap with arrestees. Thus, it is not necessary to reduce the population of addict-arrestees by any number of treated or homeless cocaine users.

D. HOUSEHOLD SURVEY: OVERLAP WITH OTHER SURVEYS

In section V, this report turned to the hard-core cocaine addicts counted in the Household Survey. As has been widely publicized, the Survey concludes that there are 860,000 cocaine addicts in the United States. Since the Survey does not measure drug abuse among the homeless, this report concludes that there is no overlap between the Household Survey and the homeless addicts identified by this analysis. The question which remains is, how many of the Survey addicts were either treated or arrested?

The 1985 Household Survey asked its respondents if they had "gotten into trouble with the police as a result of their drug use." About 1 percent of those who admitted to using cocaine also said their drug use got them into trouble with the police. This analysis assumes, to generate the most conservative estimate possible, that all those who admitted getting into trouble with police were hard-core addicts and that all those who "got into trouble with the police" were arrested. This indicates that about 10 percent of the hard-core cocaine addicts were arrested.

Funded Research Concerning Persons Who Are Homeless and Mentally Ill (Program for the Homeless Mentally Ill, Feb. 9, 1989).

[27] Bruce D. Johnson, et al., *Illicit Substance Use Among Adults in Nev York State's Transient Population*, December 1988.

This question from the 1985 Survey also requires that the arrest result from the respondent's drug use. Again to generate the most conservative estimate possible—that is, to assume that an addict included in the Household Survey is also included in our arrestee survey whenever there is a chance he might be—this analysis assumes that these arrests only include arrests for buying or dealing drugs. Research on other addict populations revealed that such drug arrests account for about one-third of the addicts' arrests.[28]

Thus, this analysis finds that about 30 percent of the 862,000 cocaine addicts identified by NIDA researchers are included in our survey of arrestees.

The 1985 Survey also asked respondents whether they sought treatment for their addictions during the past year. These data are not available, however, NIDA researchers found that only half of a representative sample who were in a treatment program admitted that receiving treatment. Consequently, NIDA researchers never tabulated these data for inclusion in the 1985 Household Survey.

This report is forced to extrapolate data from our surveys to the Household Survey data. The 200,000 addicts indentified in the survey of drug treatment constitute about one-tenth of the total 2,200,000 cocaine addicts. This analysis applies this proportion to the Household Survey, generating an overlap of 86,000—10 percent of the Household Survey—between our treatment survey and the Household Survey.

To produce the most conservative estimate, this analysis sums the arrestee-overlap (30 percent) and the treatment-overlap (10 percent) to assess the total overlap between the Household Survey and our other surveys. All told, then, this report concludes that 40 percent of the 862,000 Household Survey addicts—345,000—are included in our other surveys. The remaining 517,000 Household Survey addicts are added to the national total.

The accuracy of this calculation is confirmed by an alternate methodology. The report concludes that about 500,000 of the 2,200,000 national total were neither arrested nor treated. Equivalently, about 75 percent of all cocaine addicts *were* either arrested or treated. This proportion is similar to that found among other addicts. For example, 78 percent of a sample of heroin addicts living in New York City had never been arrested.[29] Our research on homeless addicts revealed higher proportions being arrested or seeking treatment—roughly 90 percent—but, as argued above, homeless addicts are, on average, in more desperate straits than other addicts.

E. HARD-CORE ADDICTS: NATIONAL TOTAL

All told, the sum of our four surveys, less any addicts included in more than one of the surveys, indicates a national total of approximately 2,200,000 hard-core cocaine addicts. Even this figure—an astounding 2½ times the official Government estimate—is probably too low. In each of the three surveys original to this report, as well

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[28] Ball, et al., "Lifetime Criminality of Heroin Addicts in the United States," *Journal of Drug Issues*, Summer 1982, pp. 233-235.

[29] Bruce Johnson, et al., *Taking Care of Business* (Lexington, MA: Lexington Books, 1985), p. 171.

as in generating the national total, this report employed only the most conservative estimates. This report undercounted the number of hard-core addicts among drug treatment patients, homeless people and arrestees. And, when generating the national total, this report, overestimated the overlap among the surveys.

Consequently, we believe that our estimate of 2,200,000 hard-core cocaine addicts is an extremely conservative total.

Section VII.—Conclusions and Recommendations

In a decade that saw an overall decline in drug use, the 1980's witnessed an explosion in the number of hard-core cocaine addicts. This troublesome group swelled its ranks despite the Nation's many anti-drug efforts.

This report concludes that there are many more hard-core addicts than the Federal Government has previously estimated. In fact, the actual number is about 2½ times greater than the prevailing estimate.

These hard-core addicts are the root causes of a tremendous share of America's drug-fueled problems. The addicts who break into our homes, turn our neighborhoods into war zones, and spread disease by selling their bodies are not casual, once-a-month users of illicit drugs—they are America's hard-core addicts. The children of the hard-core addict suffer even more severely, often from physical abuse, and always from neglect. And beyond these social costs, the hard-core addict is a pained and suffering individual who requires a helping hand to return to a productive life.

A hard-core addict population 2½ times that previously believed to exist delivers a clear message—our national drug policy must focus more intently on the hard-core addict.

Social values are changing and, as they do, the number of casual drug users dwindles. On that, the evidence is clear. But hard-core addicts are not swayed by social pressures—at least they have not been so far. Meeting the challenge posed by the hard-core addict requires tough, bold action—forcing the addict to chose between drug treatment and jail.

A. HARD-CORE ADDICTS: SCOPE OF THE PROBLEM

This report presents a comprehensive study of hard-core addicts previsouly conducted. Beyond the official Government sources, this report looked to the streets, treatment centers, and prison system.

Confirming the suspicions of many epidemiologists and drug abuse researchers, this report found that, even by the most conservative estimate, the number of hard-core cocaine addicts is more than two-and-a-half times the Household Survey estimate. Instead of 860,000 addicts, there are 2,200,000.

In light of the Government's information gathering methods, one should expect an undercount. The Household Survey neglects the three high-risk groups, those who have come into contact with treatment centers, police departments, and homeless shelters.

Moreover, those groups that are queried by the Household Survey will no doubt provide an inaccurate (low) final count. As described above, the self-reporting method is inherently flawed, par-

ticularly given America's current widespread fear and condemnation of drug use.

Intuitively even, the Government's figures should seem low. The country's drug-related problems, from burglary to crack babies, are simply too extensive to attribute to 860,000 Americans. And the FBI found that the number of violent crimes increased by 5 percent in 1989.

America's drug problem includes all people who use illicit substances, from the casual user to the hard-core addicts. To be sure, casual users will require treatment and attention. However, hard-core addicts perpetrate by far the greatest amount of violence and destruction. Something needs to be done about them. America needs a focused plan.

B. HARD-CORE ADDICTS: A NATIONAL STRATEGY

In January, Senator Joseph R. Biden, Jr., proposed an alternative national drug strategy. The foundation upon which the strategy was based—a year's worth of study and almost 30 hearings—clearly established the need to attack the drug problem at its roots: hard-core addicts who create the demand for drugs, Andean coca farmers who create the supply; and our children who could become the next generation of drug users.

Now, it is apparent that the number of hard-core addicts is even greater than was believed in January. And, the need to target hard-core addicts is even more urgent. As Senator Biden recognized in his January strategy, the Nation must force all hard-core addicts to face one of two options—either get into a drug treatment program, or go to jail and get treatment there.

Senator Biden offered a five-part plan to achieve this result, which we have adapted and reiterated here:

1. Increase aid to cities and towns hardest hit by the drug problem;
2. Build new prisons that include treatment facilities;
3. Add 400,000 new beds in treatment centers;
4. Double State and local law enforcement grants to $900 million; and
5. Expand research into new medical treatments for drug addiction.

These 5 steps offer a viable national strategy for combatting hard-core cocaine abuse in America.

1. Increase Federal aid to cities hardest hit by the drug problem

Our first proposal is to provide a total of $300 million dollars to "Drug Emergency Areas:" cities and towns hardest hit by the drug epidemic.

It is clear that the drug problem is worse in certain areas of the country than in others. Those areas that are particularly hard-hit require more than the normal amounts of Federal aid: they need emergency aid like the disaster assistance provided to cities devastated by earthquakes and hurricanes. Generally, such hard-hit drug emergency areas are intensely urban and have large numbers of hard-core cocaine addicts.

The Federal resources devoted to "Drug Emergency Areas" could be used for enforcement, prevention, and treatment efforts. The Federal Government would provide resources directly to local agencies. Aside from monetary payments, the resources could constitute in-kind payment of Federal personnel, equipment, and facilities.

As noted above, funding local governments is an important facet of combatting hard-core addicts. The local governments will know how best to address their difficult burdens.

The bi-partisan "Drug Emergency Areas" proposal (S. 2313) requires the President and the Director of the Office of National Drug Control Policy to designate the areas after reviewing requests submitted by Governors or mayors.

2. Build new prisons that include treatment facilities

Increased levels of assistance to State and local law enforcement agencies will result in higher numbers of arrests. With more people being processed through the criminal justice system, one would expect large numbers of people to be imprisoned. Yet incarcerating more people will be difficult given the prison overcrowding that now exists. The horrible extent of the overcrowding has been well documented and publicized.

We must build more prisons to house the hard-core addicts that law enforcement personnel remove from city streets, back alleys, and dark buildings. As it stands, the overcrowding prevents many who deserve jail terms from receiving them—or the overcrowding forces the premature release of convicts.

This report, and many others, indicate that almost all addicts will serve time in jail or prison. And, almost all of those who do will eventually be released. Further, inmates who are not treated in prison are sure to rekindle their drug addictions and criminal activities once they are released. The sad reality is that drug treatment is available to no more than one in ten of America's inmates.

To resolve these twin problems—lack of prison space and lack of treatment facilities within prisons—the Federal Government should expand both its prison system and the availability of drug treatment within the prison system. For instance, it should devote $700 million to the construction and operation of 10 regional prisons, all of which will include drug treatment. These prisons would house 6,400 State and 1,600 Federal prisoners who have drug abuse problems. The Federal Government should allocate $150 million for the establishment of 10 boot camps, each capable of accommodating between 200 and 300 inmates for periods of 90 to 120 days.

In addition, the Federal Government should permit States to use drug treatment block grant dollars in correctional facilities.

The Biden plan calls for increasing Federal treatment dollars and developing more effective treatment methods. Both initiatives are necessary to address the problem of drug addicted offenders.

3. Add 400,000 new beds in treatment centers

For the same reason that incarcerated hard-core addicts must receive treatment—so that they can function properly in society—other addicts, those who have not been imprisoned, must have treatment available to them.

The point is that all addicts should receive effective treatment. They may voluntarily receive the care, or they may go to jail where they will be placed in treatment.

It is unquestionably preferential for addicts to volunteer for treatment. To make this possible, the Biden strategy proposes to create enough new treatment slots to treat approximately 750,000 addicts. These new slots are necessary; without them, the Nation's drug treatment system has the capacity—even if every drug treatment bed is used to treat a cocaine addict—to treat less than one-half of the 2.2 million hard-core cocaine addicts.

The Biden strategy projects that by the end of 1993, all addicts will be able to receive treatment on demand. The target date is ambitious yet feasible.

Some addicts—such as youths and pregnant women—cannot wait until the fall of 1993. Their needs are particularly urgent. Accordingly, the Biden strategy sets a separate treatment on demand target date, the end of 1991, for them. Meeting these two goals—targeted treatment on demand by 1991 and full treatment on demand by 1993—will require expenditures in the first year totalling $3 billion.

Hard-core addicts will not likely cure themselves. Perhaps they need little help to slip into their plight, but they require much help to regain a footing in society. One must remember that their lives are not completely forfeited. Receiving drug treatment is an important, productive step, and society must do its part to help the recovering addicts along.

4. Double State and local law enforcement grants to $900 million

The Federal Government has devoted the bulk of its anti-drug resources to supply-reduction efforts. Specifically, it has targeted the drug kingpins, the "big fish" who are expensive to catch and relatively few in number. When caught, though, the arrests of kingpins attract much publicity.

The arrest and conviction of the common hard-core addict does not inspire glamorous and large newspaper headlines. Yet the hard-core addicts are the ones who wreak the most havoc on society. They are the ones who perpetrate the majority of drug-related violent and property crimes. The hard-core addicts elicit the most fear from law-abiding citizens, perhaps because they pose a nearer, more physical threat—controlling streets, terrorizing neighborhoods.

While the Federal Government is in the best position to address national and international drug problems, the State and local governments are best suited to the task of apprehending hard-core addicts. The addicts, generally speaking, are not interstate operators. Rather, they inhabit the inner cities and towns—places better known and more accessible to State/local law enforcement personnel. Yet these personnel cannot exercise their advantages without adequate Federal support—and they are not receiving such support now.

In sum, addicts perpetrate the bulk of drug-related criminal activity, and State and local law enforcement personnel can best address this criminal element. Only by increasing law enforcement funds to the appropriate State and local agencies can the Federal

Government bring about the necessary reduction in the kind of criminal activity that most worries mainstream America.

5. Expand drug treatment research

Treatment works. Sometimes, however, addictions are so powerful that drug users do not complete their treatment regimen. They relapse and turn back to their illicit habits. Relapse is most prevalent among hard-core addicts. Recent scientific discoveries promise that such relapses will occur less frequently.

The administration's first Drug Control Strategy suggested that 25 percent of drug users are so consumed by their addictions that treatment is not a viable option for them.

These addicts the administration has given up on are not as helpless as one might think. To the contrary, help for them is waiting just around the corner. In fact, better help for all drug addicts may be on the horizon.

On December 13, 1989, the Senate Judiciary Committee released a staff report on pharmacotherapy, a new, exciting and effective part of drug treatment. In pharmacotherapy, physicians use medicines to treat the disease of addiction. A $1 billion decade-long plan, outlined in the committee's report, is necessary to promote the development and distribution of these medicines.

The medicines, called pharmacotherapeutics, will benefit hard-core addicts greatly. While the medicines do not cure addiction—they are not "magic pills"—they will be an important part of more traditional treatment methods such as therapeutic communities and half-way houses. Methadone, a medicine to treat opiate addiction, is perhaps the best known pharmacotherapeutic agent.

There are at least 30 others under investigation or already approved for prescription use. Some may be used to treat opiates such as heroin or stimulants such as cocaine. Still others may be used to treat combined heroin-cocaine addictions.

The medications can reduce the craving for, block the behavioral and physiological effects of, and moderate the withdrawal from illicit drugs.

All of these qualities have important implications for the treatment of hard-core addicts. Most notably, they will allow addicts to stabilize their lives and illicit desires. Once they are in better physical control of themselves, they will be more receptive to psychological, vocational and other counselling.

C. CONCLUSION

This five-part plan entails about $5.1 billion in expenditures. The administration's plan—for Drug Emergency Areas, assistance for State and local law enforcement, prisons, drug treatment and research—calls for about $2.7 billion. While the Biden strategy sets ambitious targets, its cost pales in comparison to the price of inaction. For example, treating and caring for the 100,000 crack babies born each year costs as much as $7 billion. The crimes committed by hard-core addicts cost victims and society enormous sums. Furthermore, hard-core addicts contract and spread AIDS, which exacts untold billions in financial and personal costs. Such tragedies will continue—in fact, they will escalate—until an adequate strategy is in place.

APPENDIX: METHODOLOGY

This appendix offers additional background and detail on the methodologies employed by the report. Both data collection procedures and data analysis procedures will be presented. We also acknowledge, as we do throughout the report, the contributions of many public officials, as well as those from experts from academia and private foundations. Without their suggestions and assistance in gathering and analyzing these data, this report would not have been possible.

Each of the methodologies employed in our three surveys—treated addicts, homeless addicts and arrested addicts—is presented in a separate section of this appendix.

SECTION II.—TREATMENT

The number of those with hard-core cocaine problems who have asked for treatment was compiled by contacting members of the National Association of State Alcohol and Drug Abuse Directors [NASADAD]. Each state supplied information about admissions to publicly run or supported treatment programs. Four States—Iowa, Kansas, Kentucky and Maine—supplied data on individuals admitted to treatment. All the others provided total admissions.

Most addicts' drug problems are assessed upon admission to a treatment program Until 1981, the Federal Government supported these assessments and collected these data through the Client-Oriented Drug Abuse Profile, or "CODAP" system. Each drug abused by the patient is classified as the primary, secondary or tertiary drug of abuse. Wherever possible, we omitted those addicts who reported cocaine as only a tertiary problem.

Many of our conclusions are based on the recently published Treatment Outcome Prospective Study—the TOPS study conducted by researchers at North Carolina's Research Triangle Institute with support from the National Institute on Drug Abuse. The TOPS study is the largest and most comprehensive survey of the Nation's drug treatment system. Its results are based on 5 years' followup study of 10,000 addicts admitted to treatment between 1979 and 1981.

HARD-CORE COCAINE ADDICTS IN TREATMENT; OVERLAP WITH ARRESTEE SURVEY

The formulae which follow summarize our calculation of both the national and each State's hard-core cocaine addict population receiving treatment. Translating cocaine admissions data into hard-core cocaine addicts, less the overlap with arrested addicts, requires several steps—converting admissions into addicts; addicts into hard-core addicts; and hard-core addicts into unarrested hard-core addicts.

X = State cocaine treatment admissions
Y = State treated cocaine addicts
Z = State treated hard-core cocaine addicts
T = State treated hard-core cocaine addicts, not arrested

National Total:

$\Sigma(X*0.7)=\Sigma Y;\Sigma(Y*0.95)=\Sigma Z;\Sigma(Z*0.6)=\Sigma T$

State Total:

$(X*0.7)=Y;(X*0.95)=Z;(X*0.6)=T$

Section III.—Homeless

To derive estimates of the number of hard-core cocaine users among the homeless, it was necessary to assimilate information from a variety of sources. The Interagency Council on the Homeless provided State contacts for homeless issues. The U.S. Department of Education supplied information on the numbers of homeless children in each State. The Coalition for the Homeless, Partnership for the Homeless and other homeless advocacy groups supplied recent reports which contained data on the prevalence of homelessness in major U.S. cities. New York State's Division of Substance Abuse Services also provided reports from which data on both the numbers of homeless and the numbers of hard-core cocaine users were derived.

In addition, academicians with a strong background in homeless issues were contacted, and their most current research was analyzed.

The aforementioned reports yield two basic methods for measuring hard-core drug abuse among the homeless. Some studies compared homeless populations with the general population. As indicated in the report, these comparisons reveal a proportion of hard-core cocaine addiction among the homeless that is about five times the proportion found in the Household Survey.

To confirm the accuracy of this analysis, we conducted interviews with more than 20 State and local officials from around the country. These officials estimated the total proportion of substance abusers among the homeless. The estimates were remarkably consistent across the country—the prevalence of substance abuse problems among the homeless falling between 30 percent and 40 percent.

Cut of this total, these officials and practitioners estimated that about one-tenth were hard-core cocaine addicts. The resulting range (3 percent to 4 percent) is close to the five-times-Household-Survey estimate (2.5 percent) used in this analysis. Moreover, sensitivity analysis (offered below) indicates that even significant changes in estimates of the homeless total or the prevalence of hard-core cocaine addiction have little impact on the national total.

SENSITIVITY ANALYSIS

X = homeless population, national total
Y = prevalence of hard-core cocaine addiction among homeless
Z = homeless hard-core cocaine addicts, national total

Formula: $X*Y=Z$

	Low	Point estimate	High
Population range	1,000,000	2,100,000	3,000,000
Prevalence range (percent)	0.4	2.5	10

	Population	Prevalence	Homeless addicts	Percent of national total
Estimates	1,000,000	0.004	4,000	0.2
	1,000,000	0.025	25,000	1.1
	1,000,000	0.050	50,000	2.3
	1,000,000	0.100	100,000	4.5
	2,100,000	0.004	8,800	4
	2,100,000	**0.025**	**55,000**	**2.5**
	2,100,000	0.050	105,000	4.7
	2,100,000	0.100	210,000	9.5
	3,000,000	0.004	12,000	.5
	3,000,000	0.025	75,000	3.4
	3,000,000	0.050	150,000	6.8
	3,000,000	0.100	300,000	13.6

Section IV.—Arrestees

The Federal Bureau of Investigation provided the arrest data gathered through the Uniform Crime Reporting system. We used the arrest data reported by each city, county or locality, not arrest rate data. All but two States reported in 1988. FBI data from 1987 was used for Tennessee and Florida, the two non-reporting jurisdictions.

Data from the National Institute of Justice's Drug Use Forecasting System for 1988 indicates:

Percentage testing positive for cocaine

City:	
Birmingham	51
Chicago	58
Cleveland	52
Dallas	49
Detroit	51
Fort Lauderdale	42
Houston	49
Indianapolis	15
Kansas City	41
Los Angeles	60
Miami	64
New Orleans	51
New York	74
Omaha	23
Philadelphia	72
Phoenix	30
Portland, Oregon	40
San Antonio	38
San Diego	43
St. Louis	38
Washington, D.C.	60

The simple average of the DUF city cocaine positive rates is 47-percent. This average is based on an equal weighting of all DUF cities. Thus, New York City's 74-percent rate is weighted no more, and no less, than Omaha's 23-percent rate. The average weighted

by arrest is much higher than the simple average—59-percent as compared to 47-percent. The discrepancy is an artifact of the greater cocaine prevalence found in larger cities. That is, New York City's 74-percent rate is weighted roughly 36 times that of Omaha's 23-percent rate—reflecting the fact that New York City has about 36 times more arrests than Omaha.

Other researchers have suggested that changes in a city's drug-related hospital emergency room admissions and drug-related deaths correspond in changes in the levels of other drug-related problems.

This report conducted both bivariate and multivariate regression analysis to examine the relationship between medical emergencies or deaths and the prevalence of cocaine use among arrestees. A statistically significant relationship would predict rates analogous to the DUF rates for cities not included in the DUF system.

Before either drug-related emergency room visits or drug-related deaths were included in the regression analysis, we corrected for differences in each city's use of its emergency rooms or medical examiners offices. If, for example, Boston provides relatively more medical services through its emergency rooms than Chicago, and if the two cities treated the same number of drug-related emergency room cases, Boston would have an *rate* of drug-related cases artificially lower than Chicago's.

Both this problem and its solution were identified by Mark A.R. Kleiman and David Cavanaugh. Their solution is illustrated in the equation which follows:

X = emergency room visits
X ~ = cocaine-related emergency room visits
P = population covered by emergency room

$$[((X\sim)*(1/X))*10{,}000]*[1/((X)*(1/P))*10{,}000)]$$

A city's cocaine-related deaths proved to be the strongest predictor of the proportion of arrestees testing positive for cocaine. Bivariate regression, using cocaine-related deaths as the independent variable and the proportion of arrestees testing positive for cocaine, indicates the following statistically significant relationship:

X = cocaine-related deaths, from medical examiner data
Y = percent cocaine-positive tests among arrestees
a = constant (0.40)
b = X Coefficient (0.018)

$$Y = A + b(X);\ Y = 0.40 + 0.018(X)$$

The strength of the relationship is illustrated by a few measures. The coefficient of determination (R-squared) measures the proportion of variation in the dependent variable (cocaine-positive arrestee rate) that is explained by change in the independent variable (cocaine-related deaths.) Equivalently, the quantity—1 minutes R-squared—is the percentage of variation in the dependent variable which is explained by other factors.

The R-squared corresponding to this relationship is 0.378—indicating that almost 38 percent of the variation in cocaine-positive rates among arrestees is explained by changes in cocaine related deaths.

The standard error of the Y-estimate (the dependent variable, in this case, cocaine positive arrestees) indicates the dispersion of actual Y values from the values predicted by the regression equation. For this equation, the standard error of the Y-estimate is 0.13; confirming the statistical significance of the relationship.

T-statistics indicate whether the coefficient accompanying an independent variable is statistically different from zero, that is, whether or not the relationship is statistically significant. To test whether or not the X-coefficient (cocaine-related deaths) is statistically different from zero, we begin with the null hypothesis—that the X-coefficient is not different from zero. The T-statistic for this regression equation is 2.6—the X-coefficient (0.018) divided by its standard error (0.007). This indicates that if the actual coefficient (as opposed to the one measured here) were zero, the results revealed by our analysis would be 2.6 standard deviations from zero. The probablity of this occurring are remote—less than one in a hundred. Thus, we can reject the null hypothesis and accept the X-coefficient as statistically significant.

Section V.—Household Survey

We estimate that about 40 percent of the 892,000 hard-core cocaine addicts identified by the Household Survey were included in our surveys of arrested or treated addicts. The remaining 60 percent—517,000 addicts—is added to our national figure.

These 517,000 addicts were allocated these to each State according to the proportion estiblished from arrestee and treatment data. For example, Connecticut had about 18,000 treated or arrested addicts (double-counts extracted)—1.1 percent of the 1,650,000 total treated or arrested addicts (again, double-counts extracted.) Thus, 1.1 percent of the 517,000 Household Survey addicts—about 5,700—are believed to live in Connecticut.

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